



**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES**

[Handwritten signature]
K. Cobb
12/18/03

In re PATENT application of:

Applicants: Pierre H.G. Kobben et al.
Application No.: 10/087,613
Filing Date: March 1, 2002
Title: CUSHIONING CONVERSION MACHINE HAVING HEAVY DUTY CHARACTERISTICS
Examiner: Christopher R. Harmon
Art Unit: 3721
Attorney Docket: RANPP0310USA

APPEAL BRIEF

Mail Stop Appeal Brief-Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

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Dear Sir:

The undersigned submits this brief in triplicate for the Board's consideration of the appeal of the Examiner's decision, mailed June 4, 2003, finally rejecting claims 14-21 of the above-identified application.

I. Real Party in Interest

The real party in interest in the present appeal is the assignee, Ranpak Corp.

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II. Related Appeals and Interferences

Neither appellants, appellants' legal representative, nor the assignee of the present application are unaware of any appeals or interferences which will directly

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affect, which will be directly affected by, or which will have a bearing on the Board's decision in the pending appeal.

III. Status of Claims

Claims 14-21 stand finally rejected and are the subject of this appeal. A correct copy of these claims is reproduced in Appendix A.

IV. Status of Amendments

There are no outstanding amendments.

V. Background

In the process of shipping an item from one location to another, protective packaging material is often placed in the shipping container to fill any voids or to cushion the item during the shipping process. Paper in sheet form, preferably converted into a relatively low density pad-like cushioning or dunnage product, is an exemplary packaging material. This conversion may be accomplished by a cushioning conversion machine, such as that disclosed in the applied prior art reference, U.S. Patent No. 5,873,809 to Kempster et al. (referred to as "Kempster").

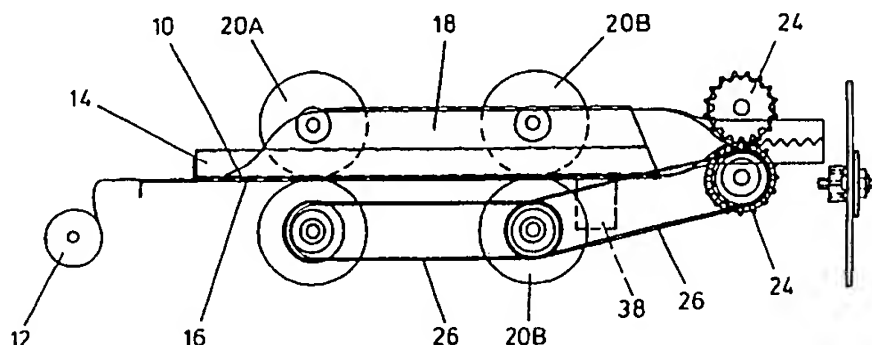


FIG. 2

Kempster discloses a packaging material making machine with a separate pulling means (including wheels 20A and 20B) arranged to pull sheet material, such as paper 10, from a roll 12 to a former 16 and a connecting means in the form of a pair of meshing gear wheels 24 located downstream of the pulling means. The gear wheels are spring biased towards each other, although no springs are shown in the drawings. The action of the gear wheels 24 deforms the surfaces of the paper 10 that pass between them to hold the dunnage together.

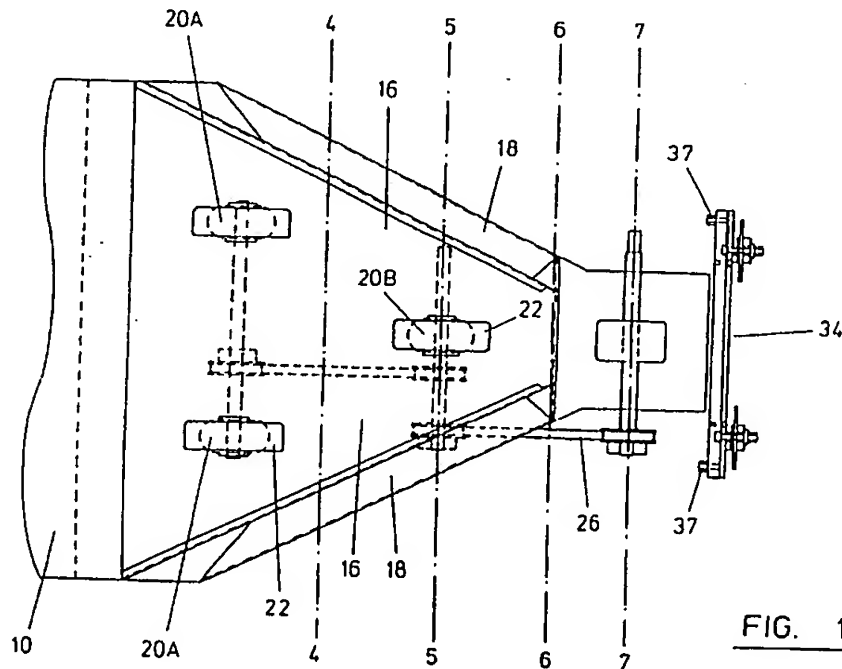


FIG. 1

As the gear wheels 24 are spring loaded towards each other, they can move

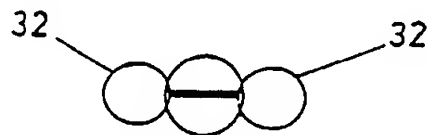


FIG. 7

apart occasionally, if required, to allow the randomly crumpled paper to be pushed through. As seen in Fig. 7, the resulting dunnage product has lateral pillow-like portions 32 and a narrow central connecting band 30 that is passed between the gear wheels to connect overlapped layers of paper therein to maintain the shape of the dunnage product. (See Kempster, col. 1, lines 4-26, and generally col. 3, line 15 through col. 4, line 5.)

VI. Summary of Invention Defined in the Claims on Appeal

The present invention improves upon the gear assembly of Kempster. In particular, the claimed invention provides at least one significant advantage over Kempster, namely the ability to quickly separate the gears to clear a jam.

The claims define a cushioning conversion machine 10 having a conversion assembly 20 that converts sheet stock material 16 into a cushioning product. The conversion assembly includes a frame 206 and a connecting assembly 36. (See generally, specification pp. 8-9.)

In the embodiment illustrated in Figs. 5, 8, and 9, reproduced below, the connecting assembly 36 includes first and second rotating feed members, in the form of a pair of cooperating and opposed gears 140 and 142. The gears 140 and 142 pull the stock material 16 through a forming assembly 32, and also connect, as by coining or stitching, for example, the formed stock material 16 along a central band to form a connected strip of cushioning. In this sense "connect" means to form the strip in such a manner that it will retain its cushioning properties as opposed to reverting to the original flat form of the stock material, thereby holding the three-dimensional crumpled or crinkled shape of the strip. (Specification, p. 14, lines 21-26.)

The gears 140 and 142 comprise a rotating driving toothed-wheel gear-like member 140 and a rotating idler toothed-wheel gear-like member 142. The driving gear-like member 140 is mounted on a driving shaft 150 which is mounted in a frame 152 supported by the housing 38 of the conversion assembly 20, specifically the frame

end plate 206. The driving shaft 150 is driven by the motor 40. (Specification, p. 14, lines 21-26.)

The rotating idler gear-like member 142 is mounted on an idler shaft 154 (Fig. 8) rotatably mounted in a carrier, which in the illustrated embodiment is a generally L-shaped pivot member 160, for movement between an operative position (Fig. 8) and an inoperative position (Fig. 9). The pivot member 160 is rotatably mounted to a support shaft 162 (see Figs. 8 and 9). The support shaft 162 is connected at its ends to the frame 152 and thus to the frame 206. The generally L-shaped pivot member 160 may be rotated to move the rotating gear 142 toward (Fig. 8) or away (Fig. 9) from the driving gear 140 to allow paper jams, for example, to be easily resolved. (Specification, p. 14, line 27 through p. 15, line 2.)

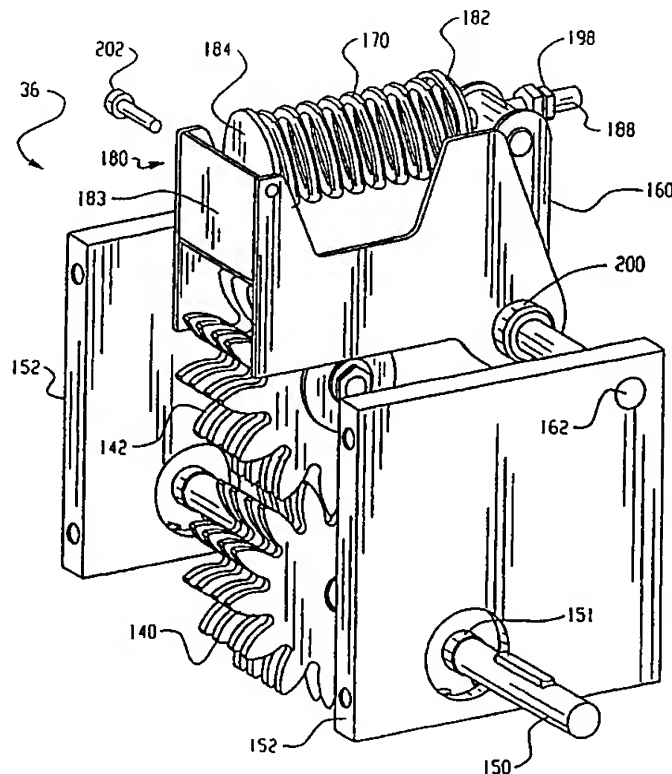


Fig. 5

The pivot member 160, and consequently the rotating gear 142, is resiliently urged towards the driving gear 140 by a biasing member, such as a spring 170, a coil spring in the illustrated embodiment, disposed between the frame 206 and the pivot member 160. The spring 170 exerts a biasing force against the pivot member 160 in the operative position, and the resilient spring biasing force substantially continuously maintains the rotating gear 142 in cooperative relationship with the driving gear 140 during a conversion process. (Specification, p. 15, lines 3-9.)

The spring 170 is carried by a mounting assembly, generally indicated by reference number 180. More particularly, the spring 170 is interposed between a bearing plate 182 and an adjustable stop 184 of the mounting assembly 180. The mounting assembly 180 is movable between a locked condition whereat the carrier or pivot member 160 may pivot about the frame over a prescribed angular range, and a

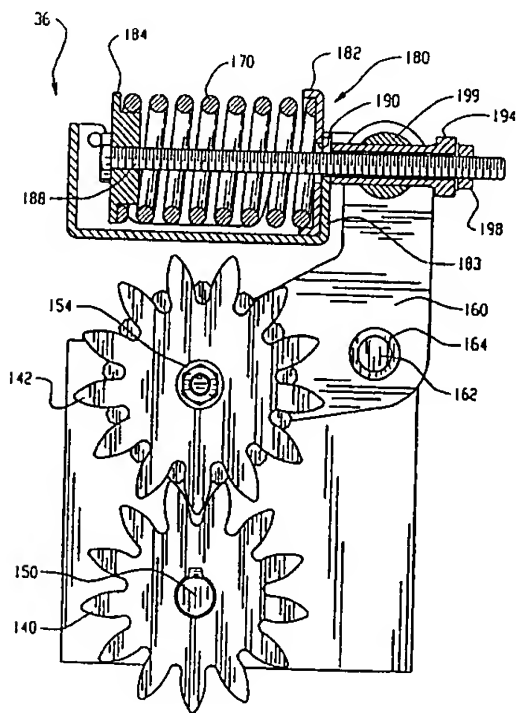


Fig. 8

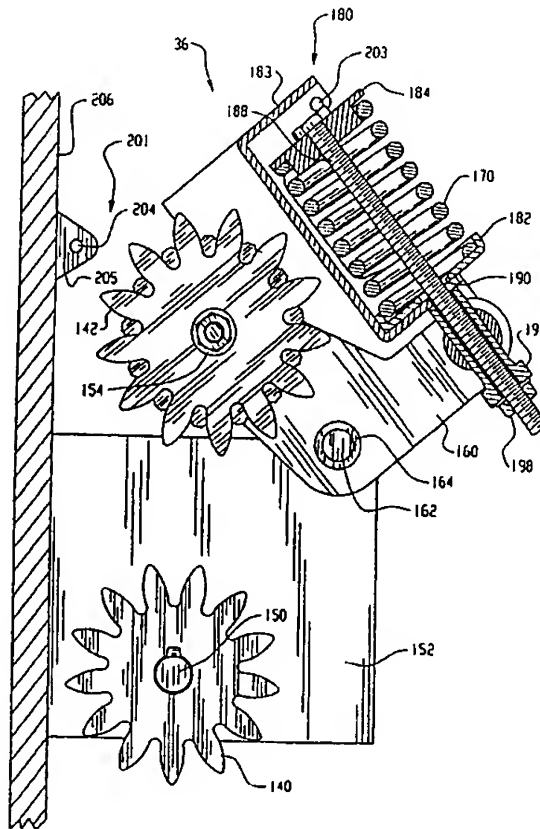


Fig. 9

released condition whereat the mounting assembly 180 is free to pivot about the frame 206, and carry the pivot member 160 with it. The bearing plate 182 is connected to a mounting bracket 183, which either limits movement in the pivot member 160 to within a prescribed range of positions or permits its free rotation. (Specification, p. 15, lines 10-17.)

The support shaft 162, which supports the pivot member 160, is mounted between side plates of the frame 152 to permit pivoting of the mounting bracket 183 about the axis of the support shaft between the operating position (Fig. 8) and a release position (Fig. 9). The mounting bracket, and thus the pivot member 160, is retained in the operating position by a releasable locking device 201. The locking device may be in the form of a quick connect/disconnect pin 202 that may be inserted through aligned openings 203 and 204 respectively provided in the mounting bracket 183 and a mounting lug 205. The mounting lug may be in the form of a clevis mounted to the machine frame end plate 206 (Figs. 2 and 9). (Specification, p. 16, lines 10-19.)

Thus, the releasable locking device 201, in a locked position, resiliently holds the pivot member 160 in its operative position thereby biasing the idler gear 142 towards the driven gear 140 to apply a pinch force to stock material being fed between the gears 140 and 142. In an unlocked position, the released locking device 201 allows the pivot member 160 to be pivoted from its operative position to its inoperative position to move the idler gear 142 away from the driven gear 140, for clearing a jam, for example. (Specification, p. 16, line 30 through p. 17, line 9.)

VII. Applied Prior Art

U.S. Patent No. 5,873,809 (referred to herein as "Kempster") and
U.S. Patent No. 3,089,695 (referred to herein as "Brooks").

VIII. Issue

Whether claims 14-21 were properly rejected under 35 U.S.C. § 103(a) as being unpatentable over Kempster in view of Brooks.

IX. Grouping of Claims

Claims 14-21 stand or fall individually; none of the claims stand or fall together.

X. Argument

It is respectfully submitted that the Examiner has failed to establish a *prima facie* case for obviousness, no motivation having been found for modifying Kempster in the proposed manner in view of Brooks. Therefore, the final rejection of claims 14-21 is improper and should be reversed.

Examiner's Rejection

The Examiner has taken the position that Kempster discloses all of the claim limitations except those related to how the feed members are pivotally mounted in a lockable carrier, but that it would have been obvious to mount the feed members in the manner taught by Brooks to arrive at the claimed invention.

Kempster et al. disclose a cushioning conversion machine comprising a frame; first and second rotating feed members 24 resiliently biased towards one another by springs; see figure 10. The lower feed member is driven and the upper is positioned upon an idler shaft. The members form a pinch force on the material fed between.

Kempster et al. do not disclose exactly how the biased members are mounted, however Brooks teach rotating feed member 1 in carriers 23 (figure 3) pivotally mounted on pivots biased by springs 68. The releasable locking device is in the form of a hydraulic cylinder 40. When the device is in its locked position the cylinder forces the cylinder towards roller 2 and when released allows for pivoting away.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to mount the rotating members as taught by

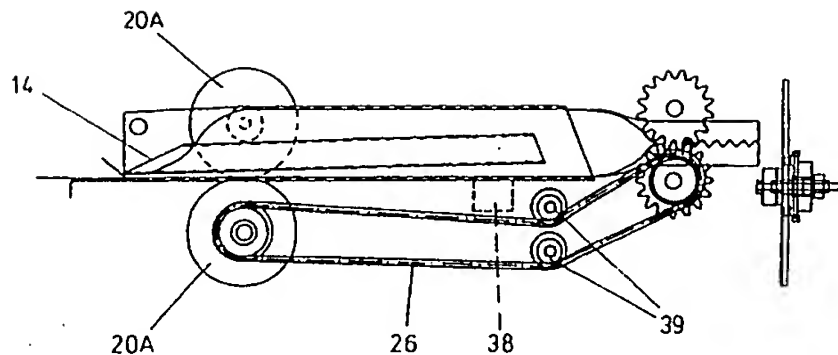


FIG. 10

Brooks in the invention Kempster et al. in order to provide biasing towards one another. Paper No. 12, p. 2. The Examiner's only alleged motivation for the proposed combination is that a person of ordinary skill in the art would modify Kempster in view of Brooks "in order to provide biasing [of Kempster's gear wheels] toward on another." (Paper No. 12, p. 2)

But Kempster already discloses biasing the gear wheels toward one another. Since Kempster already discloses biasing, Brooks adds nothing to that finding. Thus, the provision of biasing would not motivate a person of ordinary skill in the art to make any changes at all. The Examiner's statement of the alleged motivation is simply not a reason for making the proposed combination.

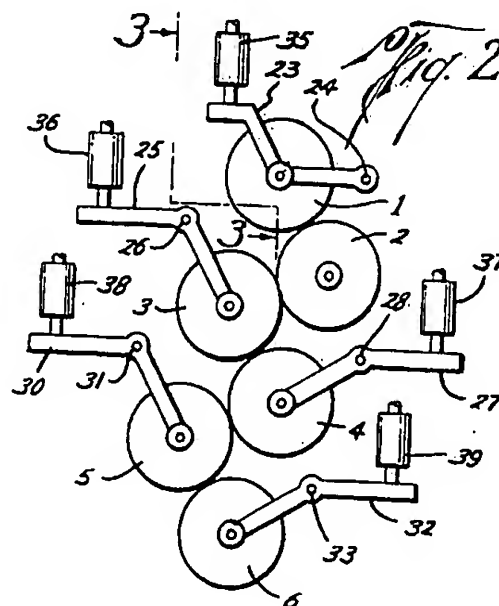
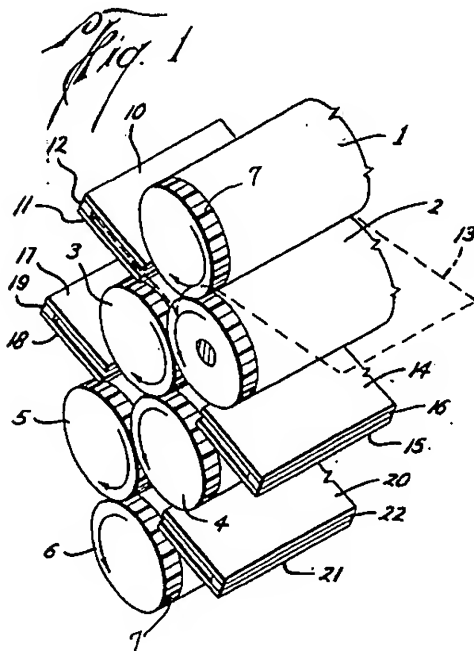
In fact, no motivation can be found for modifying Kempster in view of Brooks because:

- 1) Brooks relates to a different art, the card folding art, than Kempster's cushioning art, and
- 2) Brooks does not relate to any problem associated with Kempster's cushioning conversion machine.

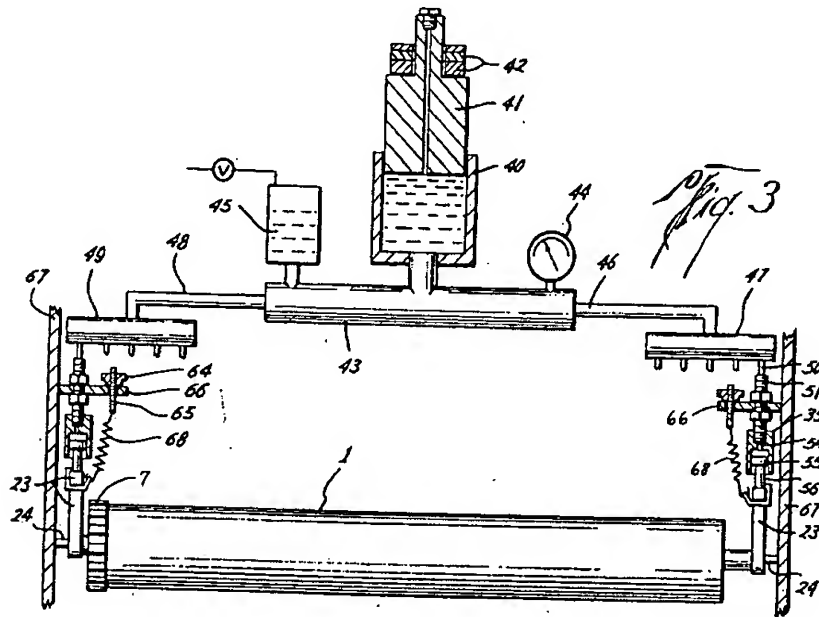
Although no springs or mounting structure is shown in Kempster's drawings, including Fig. 10 cited by the Examiner, Kempster's specification says that the gear wheels 24 are spring biased towards each other to feed a narrow central strip therethrough. (Kempster, col. 3, lines 34-35). Presumably the springs allow the gear wheels to give to accommodate the random crumpling that occurs, while remaining sufficiently engaged to feed the stock material therebetween. This allows the pad to have varying thickness. Kempster does not disclose how the biased gear wheels are mounted, and thus does not disclose the pivotally mounted carrier set forth in the claims. Kempster also does not teach or suggest any locking device or any desirability for a locking device.

Brooks fails to overcome Kempster's deficiencies

Brooks discloses a completely different apparatus, a paper-folding machine that uses a single hydraulic system to bias a series of pivotally-mounted rollers 1, 2, 3, 4, 5 and 6 against one another. Brooks concerns rollers that engage the full width of a consistent thickness of stock as it is folded. A person of ordinary skill in Kempster's



cushioning art would not have considered Brooks because such rollers would completely flatten Kempster's cushioning pads. Therefore, a person of ordinary skill in the art would not modify Kempster based on the teachings of Brooks.



Even if a person skilled in the art did consider Brooks, and the teachings of the references were combined, a person of ordinary skill in the art would not arrive at the claimed invention because neither Kempster nor Brooks disclose the claimed locking device. The Examiner asserts that Brooks' master hydraulic cylinder 40 is a locking device as set forth in the claims. While it is possible to drain hydraulic fluid from the system to "unlock" Brooks's rollers, there simply is no teaching or suggestion for doing so. Therefore, a person of ordinary skill in the art would not make the proposed combination.

The same analysis applies to each of the other claims. The references also fail to teach or suggest the following additional claim limitations:

- i. A carrier that supports the idler shaft carrying a first rotating feed member, the carrier being pivotally connected to a pivot shaft, as set forth in claim 5,
- ii. A driving shaft rotatably mounted to the frame and a second rotating feed member carried thereon, as set forth in claim 16,
- iii. A carrier, in its operating position, that is resiliently biased to urge the idler shaft and the first feed member to apply a pinch force to stock material being fed between the feed members, as set forth in claim 17,
- iv. A carrier, when the releasable locking device is in its unlocked position, that is selectively adjustable such that the idler shaft is moved toward and away from the driving shaft to adjust the distance between the feed members, as set forth in claim 18,
- v. A mounting assembly movable between a locked condition where the carrier may pivot about the frame over a prescribed angular range, and a released condition where the mounting assembly is free to pivot about the frame, and carry the carrier along with it, as set forth in claim 19,
- vi. A biasing member interposed between the carrier and the mounting assembly for resiliently biasing the carrier relative to the mounting assembly so that when the releasable locking device is in its locked position, the biasing member urges the first rotating feed member toward the second rotating feed member, as set forth in claim 20, and
- vii. The biasing member includes a coil spring, as set forth in claim 21.

Because both Kempster and Brooks fail to teach or suggest the claimed locking device, one which in an unlocked position allows the carrier to be pivoted from its operative position to its inoperative position to move the first rotating feed member away from the second rotating feed member, combining the teachings of Kempster and

Appendix A
Claims on Appeal

14. A cushioning conversion machine comprising
a conversion assembly which converts sheet stock material into a three-dimensional cushioning product, the conversion assembly including a frame and a connecting assembly, the connecting assembly comprising:
first and second rotating feed members, the first of which is mounted in a carrier pivotally mounted to the frame for movement between an operative position and an inoperative position;
a biasing member disposed between the frame and the carrier for exerting a biasing force against the carrier when the carrier is in its operative position;
a releasable locking device which, in a locked position, resiliently holds the carrier in its operative position thereby to bias the first rotating feed member towards the second rotating feed member, and in an unlocked position allows the carrier to be pivoted from its operative position to its inoperative position to move the first rotating feed member away from the second rotating feed member.
15. A cushioning conversion machine as set forth in claim 14, wherein the carrier is pivotally connected to a pivot shaft and rotatably supports an idler shaft, the idler shaft carrying the first rotating feed member.
16. A cushioning conversion machine as set forth in claim 15, further including a driving shaft rotatably mounted to the frame and having the second rotating feed member carried thereon.

17. A cushioning conversion machine as set forth in claim 16, wherein the carrier, when in its operating position, is resiliently biased to urge the idler shaft and the first feed member carried thereon toward the driving shaft and the second feed member carried thereon so as to apply a pinch force to stock material being fed between the feed members.

18. A cushioning conversion machine as set forth in claim 16, wherein, when the releasable locking device is in its unlocked position, the carrier is selectively adjustable in such a manner that the idler shaft is movable towards and away from the driving shaft for adjusting the distance between the first rotating feed member and the second rotating feed member.

19. A cushioning conversion machine as set forth in claim 14, further including a mounting assembly movable between a locked condition whereat the carrier may pivot about the frame over a prescribed angular range, and a released condition whereat the mounting assembly is free to pivot about the frame and carry along with it the carrier.

20. A cushioning conversion machine as set forth in claim 19, wherein the biasing member is interposed between the carrier and mounting assembly for resiliently biasing the carrier relative to the mounting assembly so that, when the releasable locking device is in its locked position, the biasing member urges the first rotating feed member toward the second rotating feed member.

21. A cushioning conversion machine as set forth in claim 14, wherein the biasing member comprises a coil spring.

Brooks would not achieve the claimed invention. For any of these reasons, reversal of the rejection is requested.

I. Conclusion

In view of the foregoing, it is respectfully submitted that the claims are patentable over the applied art and that the final rejection should be reversed.

Respectfully submitted,

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CERTIFICATE OF MAILING

I hereby certify that this paper (along with any paper or item referred to as being attached or enclosed) is being deposited with the U.S. postal service on the date shown below with sufficient postage as first-class mail in an envelope addressed to Assistant Commissioner for Patents, Washington, D.C. 20231.

Date: November 10, 2003

Kristine A. Webb
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